SPIDER: POWER MANAGEMENT

PATENTED TECHNOLOGY

20 years of experience

WHAT IS SPIDER?

SPIDER is a turnkey solution to design and integrate energy-efficient power networks on SoCs.
It includes a comprehensive set of voltage regulators, monitors, oscillators, power gating IPs, and a configurable digital power controller.
SPIDER enables advanced low-power techniques such as adaptive body bias and voltage scaling.
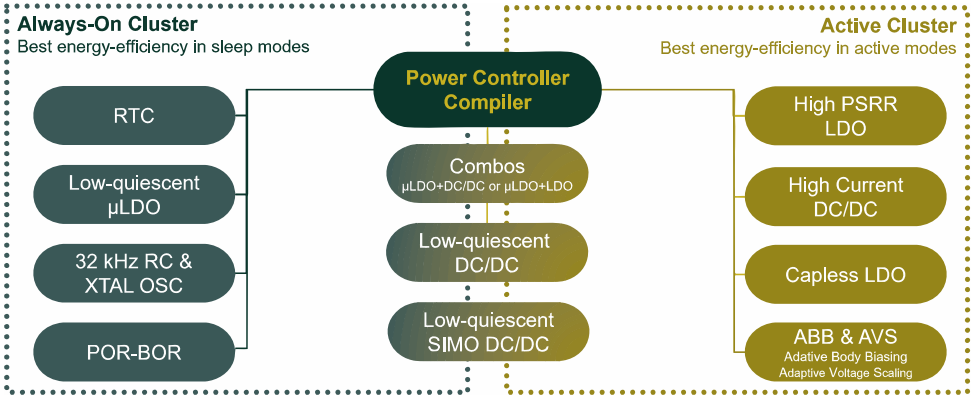SPIDER is built on Dolphin Design's state-of-the-art IP portfolio and system-level utility.
It helps designers to speed up their design flow, optimize their BoM cost, and secure their silicon.

APPLICATIONS

- High performance computing
- Medical devices
- Automotive electronics
- IoT devices
- Smartphone & Tablets
- Consumer electronics

One-Stop-Shop Platform

Always-On Cluster
Best energy-efficiency in sleep modes

- RTC
- Low-quiescent µLDO
- 32 kHz RC & XTAL OSC
- POR-BOR

Power Controller Compiler

- Combos
  µLDO+DC/DC or µLDO+LDO
- Low-quiescent DC/DC
- Low-quiescent SIMO DC/DC

Active Cluster
Best energy-efficiency in active modes

- High PSRR LDO
- High Current DC/DC
- Capless LDO
- ABB & AVS
  Adative Body Biasing
  Adaptive Voltage Scaling

Key Features

Flexible
- Up to 5.5 V input voltage with standard IO MOS
- Down to 0.5 V programmable - no trimming required
- 100 mA to 1.5 A loads

Low Power
- 350 nA Iq DC/DC
- 640 nA Iq SIMO
- 55 nA 32 kHz oscillator
- 160 nA µLDO
- 300 gates power controller for deep sleep mode

Efficient
- 70% efficiency @ 10 µA DC/DC
- 90% peak efficiency DC/DC
- 3 or 4 outputs SIMO
- 5x performances improvement via ABB corner tightening

Reliable
- 20 yrs lifetime guarantee (high reliability conf.)
- Buit-in safety features
- User-configurable & GUI-based power controller
- < 10 mVpp ripple DC/DC

DELPHIN
SEMICONDUCTOR